

Chemical Name: **CHLORINE**

Synonym: Molecular Chlorine

CAS No: 7782-50-5

 Molecular Formula: Cl₂

RTK Substance No: 0367

Description: Yellow-green gas with strong irritating odor. Can be a liquid under pressure or cold temperatures.

HAZARD DATA

Hazard Rating	Firefighting	Reactivity
4 - Health 0 - Fire 0 - Reactivity DOT#: UN 1017 ERG Guide #: 124 Hazard Class: 2.3 (Poison Gas)	Nonflammable Gas Cylinders may vent rapidly or explode when heated. Remove gas with fine water spray. DO NOT USE WATER DIRECTLY ON THE SOURCE OF THE LEAK.	Strong Oxidizer Reacts with WATER to form <i>Acid solutions</i> . Forms explosive compounds or reacts explosively with ACETYLENE, ETHER, FLUORINE COMPOUNDS, TURPENTINE, ALCOHOLS, HYDROGEN, FINELY DIVIDED METALS, AMMONIA, STRONG BASES (such as SODIUM HYDROXIDE and POTASSIUM HYDROXIDE), and MANY OTHER CHEMICALS.

SPILL/LEAKS

Isolation Distance: (All Directions):
 Small spill - 30 meters (100 feet)
 Large spill - 240 meters (800 feet)

Ventilate area to disperse gas.

Stop flow of gas or place leaking cylinder in a safe place.

DO NOT USE WATER DIRECTLY ON THE SOURCE OF LEAK.

Toxic to aquatic organisms.

PHYSICAL PROPERTIES

Odor Threshold:	0.2 to 0.4 ppm
Flash Point:	N/A
LEL:	N/A
UEL:	N/A
Vapor Density:	2.5 (air = 1)
Vapor Pressure:	5,025 mm Hg at 68°F (20°C)
Solubility:	Slightly soluble
Ionization Potential:	11.48 eV
Freezing Point:	-150°F (-101°C)
Boiling Point:	-29°F (-34°C)

EXPOSURE LIMITS

OSHA:	1 ppm Ceiling
NIOSH:	0.5 ppm 15-minute Ceiling
ACGIH:	0.5 ppm 8-hr, 1 ppm STEL
IDLH LEVEL:	10 ppm
ERPG 1	1 ppm
ERPG 2	3 ppm
ERPG 3	20 ppm

PROTECTIVE EQUIPMENT

Gloves:	Butyl, Neoprene, Viton®
Coverall:	DuPont Tychem® CPF3, CPF4, Responder®, TK®, Reflector®, Kappler Zytron® 300 and Zytron® 500
Boot:	Neoprene
Respirator:	>0.5 ppm CCR with cartridge for Chlorine or Acid Gas >5 ppm Supplied-air respirator >10 ppm SCBA

HEALTH EFFECTS

Eyes:	Irritation, burns and possible eye damage
Skin:	Irritation, burns Liquid can cause frostbite
Acute:	Nose, throat and lung irritation, coughing (Pulmonary edema) Headache, nausea, vomiting
Chronic:	Cancer - Tested (Not Classifiable). Asthma with shortness of breath, wheezing, coughing and/or chest tightness Damage to teeth, skin blisters and hoarseness

FIRST AID AND DECONTAMINATION

Remove the person from exposure.
Flush eyes with large amounts of water for at least 30 minutes. Remove contact lenses if worn. Immediate medical attention is necessary.
For contact with *liquified gas* quickly flush skin with luke warm water.
Do not rub or reheat area.
Begin artificial respiration if breathing has stopped and CPR if necessary.
Transfer to a medical facility.
Observation is recommended as symptoms may be delayed.